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10/716,411	11/20/2003	Masazumi Marutani	1344.1128	5556

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EXAMINER	
PHAN, HANH	
ART UNIT	**PAPER NUMBER**
2613	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/716,411	MARUTANI ET AL.	
	Examiner	Art Unit	
	Hanh Phan	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5,11-13,15,16 and 18-21* is/are rejected.

7)☒ Claim(s) *4,6-10,14 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 01/19/2007.

2. The indicated allowability of claims 5, 11-13, 15 is withdrawn in view of the newly discovered reference(s) to Ihara et al (US Patent No. 5,999,289), Shigeru (JP 2001320329 A, cited by applicant) and Tahara et al (US Patent No. 5,548,435). Rejections based on the newly cited reference(s) follow.

Claim Objections

3. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

-The limitations of claim 19 and the limitations of claim 16 are the same.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 5, 15, 16, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Ihara et al (US Patent No. 5,999,289).

Regarding claims 1, 5 and 21, referring to Figures 1, 2, 5, 6, 8, 9 and 14, Ihara et al teaches an optical dispersion monitoring apparatus for monitoring dispersion based on a waveform of an input optical signal, comprising:

a characteristic amount detecting section (i.e., photodetector 14, peak detection 34 and mean 38, Figs. 5 and 6) selectively detecting a physical amount corresponding to a location where waveform distortion occurring depending on dispersion appears distinctively in the waveform of the input optical signal (i.e., col. 5, lines 8-14 and 65-67 and col. 6, lines 1-42); and

a dispersion information extracting section (i.e., mean value detection 36 and comparator 40, Figs. 5 and 6) extracting information related to the dispersion occurred in the optical signal, based on a comparison between the physical amount detected in the characteristic amount detecting section and a reference value indicated by a reference signal, to output the information (i.e., col. 5, lines 8-14 and 65-67 and col. 6, lines 1-42),

wherein the characteristic amount detecting section includes:

a light receiving section (i.e., photodetector 14, Figs. 5 and 6) converting the input optical signal into an electrical signal; and

a signal transition position detecting section (i.e., peak detection 34 and mean 38, Figs. 5 and 6) detecting the voltage level corresponding to at least one of a rising edge and a falling edge of waveform of the electrical signal converted in the light receiving section, and

wherein the dispersion information extracting section (i.e., mean value detection

36 and comparator 40, Figs. 5 and 6) compares the reference value indicated by the reference signal with the voltage level detected in said signal transition position detecting section, and outputs a signal corresponding to the comparison result as dispersion information (i.e., col. 5, lines 8-14 and 65-67 and col. 6, lines 1-42).

Regarding claim 3, Ihara et al further teaches the signal transition position detecting section detects the voltage level corresponding to crossing points in an eye pattern of the electrical signal converted in said light receiving section (i.e., Fig. 5b, col. 5, lines 8-14 and 65-67 and col. 6, lines 1-42).

Regarding claim 15, referring to Figures 1, 2, 5, 6, 8, 9 and 14, Ihara et al teaches a method of monitoring optical dispersion for monitoring dispersion based on a waveform of an input optical signal, comprising:

selectively detecting a physical amount corresponding to a location where waveform distortion occurring depending on dispersion appears distinctively in the waveform of the input optical signal (i.e., Figures 5-9 and 14, col. 5, lines 65-67 and col. 6, lines 1-42); and

extracting information related to the dispersion occurred in the optical signal, based on a comparison between the detected physical amount and a reference value indicated by a reference signal (i.e., Figures 5-9 and 14, col. 5, lines 65-67 and col. 6, lines 1-42).

Regarding claims 16 and 19, Ihara et al further teaches an optical transmission system provided with a variable dispersion compensator (i.e., a variable dispersion compensator 80, Fig. 14) on a transmission path through which an optical signal is

propagated, for controlling a compensation amount of the variable dispersion compensator to dynamically compensate for dispersion (i.e., Figures 5-9 and 14, col. 5, lines 65-67 and col. 6, lines 1-42).

6. Claims 1, 3, 5, 15, 16, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Shigeru (JP 2001320329 A, cited by applicant).

Regarding claims 1, 5 and 21, referring to Figure 1, Shigeru teaches an optical dispersion monitoring apparatus for monitoring dispersion based on a waveform of an input optical signal, comprising:

a characteristic amount detecting section (i.e., O/E converter 3, AC coupler 5, , lowpass filter 8, offset adjustment circuit 6 and a rectifier 7, Fig. 1) selectively detecting a physical amount corresponding to a location where waveform distortion occurring depending on dispersion appears distinctively in the waveform of the input optical signal (i.e., see abstract section and Figure 1); and

dispersion information extracting section (i.e., a voltage comparison circuit 9 and a variable voltage circuit 11 and a voltage monitor 10, Fig. 1) extracting information related to the dispersion occurred in the optical signal, based on a comparison between the physical amount detected in the characteristic amount detecting section and a reference value indicated by a reference signal, to output the information (i.e., see abstract section and Figure 1),

wherein the characteristic amount detecting section includes:

a light receiving section (i.e., O/E converter 3, Fig. 1) converting

the input optical signal into an electrical signal; and

a signal transition position detecting section (i.e., AC coupler 5, , lowpass filter 8, offset adjustment circuit 6 and a rectifier 7, Fig. 1) detecting the voltage level corresponding to at least one of a rising edge and a falling edge of waveform of the electrical signal converted in the light receiving section, and

wherein the dispersion information extracting section (i.e., a voltage comparison circuit 9 and a variable voltage circuit 11 and a voltage monitor 10, Fig. 1) compares the reference value indicated by the reference signal with the voltage level detected in said signal transition position detecting section, and outputs a signal corresponding to the comparison result as dispersion information.

Regarding claim 3, Shigeru further teaches the signal transition position detecting section detects the voltage level corresponding to crossing points in an eye pattern of the electrical signal converted in said light receiving section (i.e., see abstract section and Figure 1),

Regarding claim 15, referring to Figure 1, Shigeru teaches a method of monitoring optical dispersion for monitoring dispersion based on a waveform of an input optical signal, comprising:

selectively detecting a physical amount corresponding to a location where waveform distortion occurring depending on dispersion appears distinctively in the waveform of the input optical signal (i.e., see abstract section and Figure 1); and

extracting information related to the dispersion occurred in the optical signal, based on a comparison between the detected physical amount and a reference value indicated by a reference signal (i.e., see abstract section and Figure 1).

Regarding claims 16 and 19, Shigeru further teaches an optical transmission system provided with a variable dispersion compensator (i.e., a variable dispersion compensator 17, Fig. 1) on a transmission path through which an optical signal is propagated, for controlling a compensation amount of the variable dispersion compensator to dynamically compensate for dispersion (i.e., see abstract section and Figure 1).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 11-13, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ihara et al (US Patent No. 5,999,289) in view of Tahara et al (US Patent No. 5,548,435).

Regarding claims 11, 18 and 20, Ihara et al differs from claims 11, 18 and 20 in that he fails to specifically teach the dispersion information extracting section sets the reference signal depending on a mark ratio of the input optical signal. However, Tahara

et al in US Patent No. 5,548,435 teaches an information extracting section (i.e., feedback controller 6, Fig. 1) sets the reference signal depending on a mark ratio of the input optical signal (i.e., col. 4, lines 21-35). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the information extracting section sets the reference signal depending on a mark ratio of the input optical signal as taught by Tahara et al in system of Ihara et al. One of ordinary skill in the art would have been motivated to do this since allowing monitoring the signal more reliably.

Regarding claims 12 and 13, Ihara et al further teaches the dispersion information extracting section sets the reference signal so as to follow a change in power setting of the input optical signal (i.e., Figures 5-9 and 14, col. 5, lines 65-67 and col. 6, lines 1-42).

9. Claims 11-13, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeru (JP 2001320329 A, cited by applicant) in view of Tahara et al (US Patent No. 5,548,435).

Regarding claims 11, 18 and 20, Shigeru differs from claims 11, 18 and 20 in that he fails to specifically teach the dispersion information extracting section sets the reference signal depending on a mark ratio of the input optical signal. However, Tahara et al in US Patent No. 5,548,435 teaches an information extracting section (i.e., feedback controller 6, Fig. 1) sets the reference signal depending on a mark ratio of the input optical signal (i.e., col. 4, lines 21-35). Based on this teaching, it would have been

obvious to one having skill in the art at the time the invention was made to incorporate the information extracting section sets the reference signal depending on a mark ratio of the input optical signal as taught by Tahara et al in system of Shigeru. One of ordinary skill in the art would have been motivated to do this since allowing monitoring the signal more reliably.

Regarding claims 12 and 13, Shigeru further teaches the dispersion information extracting section sets the reference signal so as to follow a change in power setting of the input optical signal (i.e., see abstract section and Figure 1).

Allowable Subject Matter

10. Claims 4, 6-10, 14 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments with respect to claims 1 and 3-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

HANH PHAN
PRIMARY EXAMINER